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METHOD FOR MANUFACTURING SEMICONDUCTOR DEVICE

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[There are no amendments to this patent.]

Abstract

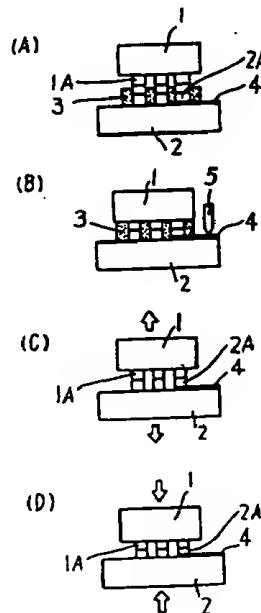
Objective

To provide a bump junction of two elements, to make it possible to sort the elements without requiring an expensive evaluating device, and to improve the manufacturing yield by recovering the elements with good quality.

Constitution

In a bump junction between two elements 1 and 2 by a flip chip bonding, a bump junction pressure-control layer 3, having a thickness that is smaller than the height of said bump prior to the junction and greater than the height of said bump after the junction, is installed at one or both of said two elements. The

quality of the entire elements is sorted by checking the characteristics under pressurization between said two elements until they make contact with said control layer. When the characteristics of the entire elements are inferior, said two elements are peeled off, and the elements with good quality are recovered. When the characteristics of the entire elements are of good quality, the junction force of the bump is reinforced by reapplying the pressure between said two elements.



Theoretical diagram of this invention.

Claims

1. A method for manufacturing a semiconductor device characterized by the fact that in a bump junction between two elements (1) and (2) by a flip chip bonding, a bump junction

pressure-control layer (3), having a thickness that is smaller than the height of said bump prior to the junction and greater than the height of said bump after the junction, is installed at one or both of said two elements; that the quality of the entire elements is then sorted by checking the characteristics under pressurization between said two elements until they make contact with said control layer; and that after removing said control layer, the junction force of the bump is reinforced by reapplying the pressure between said two elements.

2. The method for manufacturing a semiconductor device of Claim 1, characterized by the fact that the above-mentioned control layer has a hardness higher than that of the above-mentioned bump.

3. The method for manufacturing a semiconductor device of Claim 1, characterized by the fact that after the above-mentioned characteristics check, the elements with good quality are repressurized.

4. The method for manufacturing a semiconductor device of Claim 1, characterized by the fact that the above-mentioned two elements are a sensor and a signal processing circuit.

5. The method for manufacturing a semiconductor device of Claim 1, characterized by the fact that the above-mentioned bump is composed of indium, and in that the above-mentioned control layer is composed of a polyimide film.

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